

**UNITED STATES PATENT APPLICATION FOR**

Combination Garment

**BY**

Mindy Lee Allabaugh

and

Kenneth A. Frank

## **BACKGROUND OF THE INVENTION**

### **Field of the Invention**

5           The present invention relates generally to garments comprising a combination of a  
panty section and at least one leg portion. Particularly, the present invention relates to a  
pantyhose combination garment with removable hose portions. More particularly, the present  
invention relates to a pantyhose combination garment with a panty section capable of  
supporting hose portions, where the panty section may be comprised of different materials  
10   than hose, may be manufactured separately from the hose and may be removably attachable  
to the hose. The present invention also relates to a pantyhose combination garment with  
fastening means to securely support detachable hose to a supporting panty section and to a  
method of replacing damaged hose members of a pantyhose combination garment. The  
present invention also relates to combination undergarments for warmth adapted to  
15   comfortably fit members of either sex, and in particular undergarments known as long johns  
with removably attachable leg portions.

### **Description of Related Art**

20           The pantyhose arts have developed substantially since the mid 1950's. New designs  
and materials have continually added comfort and convenience for wearers of this  
fashionable apparel. Prior to the invention of pantyhose, it had been adequate to support  
stockings or hose by means of garters, belts and other cumbersome gear. These bulky  
supporting means could easily be concealed under a skirt or dress, conveniently hidden from  
25   outside view. Moreover, the long hemlines of outer garments meant that there was no need  
for the stockings or hose to continue very far up the wearer's leg, so there was little demand  
for a full-leg length hose.

The advent of higher hemlines, and particularly the miniskirt, meant little outer garment material was available to cover any more than bare necessities. This presented a two-fold problem for the wearer of hosiery garments – a full-leg length stocking or hose was required and the then-available, bulky support mechanism for a full-leg length hose was visible. As hosiery wearers well know, a full-leg length hose will not stay up on its own without bunching and sliding down the leg, but high hemlines reveal any supporting structures. Thus fashion trends of higher hemlines required a garment that eliminated the need for the separate and visible supporting gear by knitting the stockings together with a panty, creating a full-leg length covering, self-supporting garment.

10 Pantyhose were described in the patent literature at least as early as 1956. United States Patent No. 2,826,760 (Re. 25,360) teaches a combination garment in which a pair of stockings and underpants are unitarily formed. The pantyhose arts developed quickly, providing new materials and new and improved methods of forming comfortable, shape fitting pantyhose garments.

15 The invention of pantyhose did much to provide a fashionable and practical full-length covering for ankles, calves, thighs and everything in between, but did so at a loss of numerous, important conveniences. Namely, both legs and panties in pantyhose are sewn together in an inseparable configuration. This one-piece garment configuration requires that, when one leg runs or tears, both legs and the entire garment has to be replaced. Thus, the single construction of pantyhose adds considerable and unnecessary expense and wastes good, functional material unnecessarily when only a small portion of the garment is damaged or in need of replacement.

The typical two-leg-and-panty unified garment construction also completely ignores the special needs of a significant portion of the population that does not have two legs. The prior art pantyhose and long johns add bulk, expense and unnecessarily waste material. The

prior art pantyhose and long john garments also remind customers with one leg that their unique consumer needs are not important to garment manufacturers.

Inconveniently, the unitary construction of the prior art garments also requires the wearer to remove, at least partially, the entire garment – in addition to any other  
5 undergarments – when going to the bathroom. Thus, most inconveniently, the wearer must undress and then readjust and realign the panty section and the leg section of the single construction garment along nearly the entire length of the leg for every bathroom break. Because wearers of pantyhose and long johns often choose to also wear regular or conventional underwear beneath the panty section provided in the unitary garment, simple  
10 bathroom breaks require a particularly cumbersome undertaking of undressing and redressing.

Moreover, when pantyhose are worn over conventional underwear, the pantyhose panty section adds considerable bulk and an extra layer of thermal insulation, an unnecessary second or double layer that causes considerable heat retention and adds padding in an already  
15 typically well-insulated area. These bulky and heat trapping properties of the pantyhose panty are most undesirable.

The same is especially true of the leg portions of long johns – they add an extra layer of heat retaining material that cannot be removed except by completely undressing and removing the entire undergarment. Long johns are extremely useful in cold climates and  
20 during the winter to keep the wearer's legs warm. However, many people who would benefit from the extra warmth-providing layer outdoors refrain from wearing long johns because they provide too much warmth once the wearer goes indoors and cannot be removed easily. Thus, the benefit of wearing long johns is outweighed by the inconvenience and discomfort of having to wear the unitarily constructed long johns indoors where the wearer will spend a

long time without the opportunity to conveniently and/or privately undress to remove the extra warming layer provided by the entire long johns garment.

Many pantyhose designs have attempted to overcome problems found in the prior art pantyhose, but none has done so adequately. For example, United States Patent No.

5 4,019,208 teaches a combination pantyhose garment with separate seamless panty stockings of textured yarns, each one having a panty portion provided with a leg opening and a supporting band having elastomeric yarns that cross over each other in the overlapping panty portions. This patent describes stocking portions that are independent from each other, but with each stocking portion provided with its own inseparable panty portion. Thus, this design  
10 has the further disadvantage of requiring at the wearer to endure at least two layers of panty portions in addition to any conventional undergarment the wearer chooses to don. United States Patent No. 5,713,081 teaches a hosiery item that provides integrated spare leg portions in case one portion runs or develops a hole, thereby providing a ready replacement for the damaged stocking portion and saving the expense of replacing the entire pantyhose unit when  
15 only one leg portion is damaged. None of the leg portions of that garment, however, is removable or replaceable and the problem of multiple panty layers remains.

Others have attempted to provide a single unit construction for pantyhose that provides a more comfortable panty, thereby allowing the wearer to dispense with the additional conventional panty garment worn underneath the pantyhose panty. For example,  
20 United States Patent No. 5,519,894 teaches a pantyhose garment with a panty portion with good fit and support characteristics provided in part during the knitting operation and formation of the individual knitted tubes of the hose portions. United States Patent No. 6,055,674 teaches a circularly knit hosiery member and garment with a panty portion having an arcuately shaped leg profile within a lateral portion of the panty member; and United  
25 States Patent No. 4,875,241 teaches pantyhose with the panty portion having cotton

characteristics. None of these patents, however, teaches the benefits of the removably attached hose portions of the present invention.

Pantyhose remain a preferred choice for convenient and fashionable stocking leg coverings, most likely due to a lack of convenient alternatives than to any advances in comfort or fashionably high hemlines. Except in a very limited and specialized market, there appears to be very little practical appeal of the bulk, inconvenience and discomfort of the old cumbersome multi-part assemblies of garters, belts, and corsets from the days before pantyhose. It would therefore benefit the art to have available a more convenient, more comfortable, less wasteful pantyhose combination garment without so many redundant and/or bulky fastening and supporting components. It would also benefit the undergarment arts to have removable leg portions that can be removed without the wearer having to completely undress.

The present invention now provides, for the first time, a pantyhose combination garment with detachable leg portions. The present invention further provides a pantyhose combination garment with novel features that provide the conveniences of pantyhose, stockings and detachable hose with many advantages over, and without many of the disadvantages of, the prior art. The present invention also provides a combination garment with a panty and a full-leg length covering that has all of the additional conveniences and benefits of a detachable legs, a flexible, advanced and less cumbersome attachment means, and the absence of the bulk, discomfort and superfluous components and attachments of the prior garters, belts, corsets, stockings or pantyhose. The present invention also provides an advance over prior art long johns of unitary construction having permanently attached leg portions.

The present invention provides a pantyhose combination garment with separate, attachable and removable components, including a panty section and at least one stocking, leg or hose portion and attachment means. The present invention also provides the option of a more comfortable panty that does not suggest or require wearing a second or additional undergarment underneath the panty section of the present combination garment; the present invention renders a separate, additional undergarment redundant. The present invention also provides a combination undergarment that can be worn for warmth by men, women and children and that provides removably attachable leg portions. The present invention obviates the need and the expense of having to procure garments with a panty section and two integrated, attached leg portions when the wearer needs only a single leg covering. The present invention provides leg portions that can be attached and exchanged individually and independently from the panty section and each other, thus providing increased flexibility, conservation of material and cost savings by allowing replacement of a single torn or damaged leg portion as opposed to having to replace an entire integrated garment. Additionally, when a wearer desires to change the color or style of the leg portion, such as when the wearer is changing outfits for an evening or mid-day event, the present invention provides a convenient way to enable the change to be made without the wearer having to change the panty portion as well. The present invention also provides an attachment or fastening means for detachably securing a leg portion to a panty section.

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#### **Brief Description of the Drawings**

Figure 1 is a front and back view of a preferred embodiment.

Figure 2 is a front view of a preferred embodiment.

25 Figure 3 is a front view of a preferred embodiment.

Figure 4 is a back view of a preferred embodiment.

## **DETAILED DESCRIPTION OF THE INVENTION**

In a first embodiment of the present invention, shown in Figure 1, the pantyhose combination garment **10** comprises a panty section **11** and at least one stocking leg member or hose portion **12**. The panty section **11** and the hose member **12** in this embodiment each may have reciprocally aligned and interlocking components that form the fastening means **13** to removably attach the hose portion **12** to the panty section **11**. The hose portion **12** of the present invention can be of any style, material or method of manufacture. For example, hose made of stretch nylon, spandex, silk, material sold under the brand name Lycra<sup>®</sup>, cotton and blends thereof are well known. Hose styles include sheer, opaque, colored and/or fishnet, lace, etc., with or without seems. Manufacture of the hose portion **12** of the present invention may be accomplished by means well known in the art, including knitting the hose portion as a tube of fabric, optionally with an elastic band, with knitted-in welts, footies or the like.

The panty section **11** may be of any material, independent of the hose material, such as stretchable or conventional cottons, silks, and/or blended material. The panty section **11** of the present embodiment may have a stretchable elastic material **14** optionally located at the waste band **15**, that is of a comfortable width and of sufficient strength to maintain the panty section **11** firmly in place while providing support for the hose **12**, thereby preventing the hose **12** from bunching or sliding down the wearer's leg. Elastic or other support materials optionally may be present at other locations throughout the panty portion, including, but not limited to, at the leg openings **16**. The methods for manufacturing the panty portion **11** may be the same methods for manufacturing any panty or pantyhose panty section, all of which are methods well known in the art.

The fastening means **13** provided on the hose **12** and the panty section **11** comprise means for removably attaching the hose **12** to the panty section **11**, which supports the hose **12** and prevents the hose **12** from slipping or bunching on the wearer's leg. In one



embodiment, the fastening means may comprise snap means or button means located at appropriate intervals around the circumference near leg opening 16 of the panty section 11 and at approximately the same intervals around the circumference near the thigh or top portion 17 of the hose, the upper boundary of which is approximately shown for one hose member by the dotted line A in Figure 1. It is not critical to exactly match the intervals between the attachment components on each garment member; it is only critical that enough attachment components align to conveniently and comfortably attach the hose 12 to panty section 11.

As few as two sets of reciprocal snaps or buttons and buttonholes may be provided in alignment to adequately secure the hose 12 to the panty section 11. Attachment means 13 may be provided in any configuration on the panty section and on the hose portion as long as the attachment components on each are in aligned, reciprocal relation to one another. For example, as shown in Figure 1, one of the two reciprocal interlocking components of the snaps is attached to the panty section on the inside circumference near the panty portion's leg opening 16. The reciprocal snap component is affixed at corresponding intervals around the outside circumference on the top portion 17 of the hose. In this manner, the leg opening 16 extends over the top portion of the hose 17, such that the material of panty section 11 smoothes over any contours created by attachment means 13. In all embodiments, either reciprocal fastening component may be affixed to any combination garment member in a way that renders both components available to conveniently and easily connect to the facing reciprocal fastening component on the other garment member.

Other embodiments of the present invention may employ buttons or hooks as fastening means. For example, in embodiments that use hooks, the hooks may comprise any small, metal or plastic, wire-like hook, of the type already known for use in fastening garment members and which are capable of supporting the hose. The hook may latch onto or into a

stitched or embroidered or otherwise reinforced or un-reinforced receiving portion, for example, an eyelet. Fastening means comprising buttons and buttonholes also are well known for use on garments. As few as two sets of buttons or hooks can be sufficient to support the hose sections. As in previous embodiments, the buttons or hooks may be located  
5 on either the interior or exterior surface of either the panty section or hose portion.

Another embodiment of the present invention employs clips as fastening means. In this embodiment, either the hose portion or the panty section is provided with a clip means for removably fastening the two garment members together and thereby supporting the hose via the panty section, obviating the need for belts and/or garters. The clip may be any type of  
10 clip, for example, an alligator clips, owl clips, bulldog clips, suspender clips and the like. As shown in Figure 2, the clip 20 may be permanently affixed at one end 21 to one garment member and removably affixed to the other garment member at its other end 22 via a friction or clamping mechanism. In another embodiment, exemplified in Figure 3, a double-sided clip 30 may be used whereby the clip can be removably affixed to either and/or both garment  
15 portions, interchangeably via friction or clamping mechanisms 31, 32, located at both ends. In a further embodiment, not shown, the clip means may comprise any two reciprocal, interlocking components, such as those used as skirt hooks, eye clips, bra clips, swimsuit clips, slide clips, spring clips, or the like.

In yet another embodiment, as shown in Figure 4, the fastening means uses a hook  
20 and loop fastener or touch fastener, for example, the type sold under the brand name Velcro®. In this embodiment, the fastening means may comprise small reciprocal sections or pads 40, 41 of the touch fastener disposed near the top region 17 of the hose portion 12 and near the leg-opening 16 of the panty section 11. Figure 4 further exemplifies an embodiment where a cover or slat 52 is used to conceal contours of the pads 40, 41. Figure 4 shows the upper part  
25 17 of the hose 11 pulled up over the leg opening 16, shown underneath hose 11 by dotted line

A. Touch fastener pads 40 are shown on upper portion 17 of hose 12. Slat cover 52 supporting touch fastener pads 41 is shown in an open configuration on the left side. Figure 4 also shows slat cover 52 closed, on the right side, covering the upper part 17 of the hose 12, the upper boundary of which is shown underneath slat 52 by the dotted line B. It can be appreciated that in other embodiments without slats, the fastening means may be affixed at locations slightly recessed from the edges of the garment members as another way to provide a smooth fabric covering over the fastening means, thereby concealing any contours created by the fastening means under tightly or snugly fitting exterior garments.

The fastening means also may comprise a band (not shown) of the reciprocal hook and loop fastener provided around the circumference near the top of the hose and a reciprocal band around the circumference near the leg opening of the panty section. As in all previous embodiments, the two interlocking fastening components of the fastening means may be arranged in any facing, reciprocal configuration with either component affixed to either garment member. In other embodiment, either of the touch fastener components may be transferable between individual panty sections and/or between hose portions, such that one touch fastener component may be affixed to virtually any underwear, panty, undergarment that can serve as the supporting panty section of the present invention and such that the other touch fastener component may be affixed to virtually any hose portion to be supported. In such embodiments, the touch fasteners may comprise a small pin and backing, for example, so that the touch fastener may be pinned to various garment members.

As can be appreciated by the foregoing description of preferred embodiments, the intended scope of the claims includes virtually any fastening means to removably affix the leg portion to the panty section to provide simple and convenient supporting means for the leg. It can also be appreciated that in various embodiments it will be beneficial to optionally provide the garment combination members with reinforcing stitching and/or welts at or

around the fastening points to provide added durability to the garment with fastening means. It may also be beneficial to optionally incorporate reinforcing elastic or other tensioning means at optional locations, such as the leg-opening region of the panty section or the top area of the leg portion in order to help sustain the lift required for supporting the leg portion.

5           Within all the embodiments of the present invention, it is contemplated that the panty section and the leg portion may be manufactured separately or together. The method of manufacture of the leg portion and panty follows any of the conventional garment and textile manufacturing processes for panties and hose and which are well known to one of ordinary skill in the art. Also within the intended scope of the claims are combination pantyhose or  
10 long john garments manufactured in the conventional manner of prior art pantyhose and long johns, and then subsequently modified by cutting the leg portions from the panty section and providing fastening means on each garment member so that the panty portion and the leg may be removably attached. It can be understood from the foregoing that the combination garment components of the present invention may be made available to purchasers in any  
15 combination of leg members and panty sections, for instance, panties and legs together or separately, single leg portions, pairs of leg portions, multiple pairs of leg portions, single panties, multiple panties and any combinations thereof.

Many variations of the present invention will suggest themselves to those skilled in the art in light of the above-detailed description. All such obvious modifications are within  
20 the full intended scope of the appended claims. All of the above-referenced patents, patent applications and publications are hereby incorporated by reference in their entirety.